

# LANDMARK SAFE DRINKING WATER LEGISLATION FOR VICTORIA

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## Abstract

Victoria has developed far reaching, landmark legislation covering the management of drinking water quality in that State. This paper will describe the main features, principles and objectives of this ground-breaking legislation, as well as providing information about the manner in which it was developed and the hurdles that were overcome along the way.

## Introduction

Access to a reliable supply of good quality drinking water is a fundamental requirement for community health and well being. Regulatory reform coupled with the provision of good quality drinking water can therefore be expected to enhance the quality of life of any jurisdiction and overall business competitiveness of any economy. Meeting this expectation involves ensuring the safety of drinking water from a public health point of view, assuring the water's aesthetic quality and assuring that the community is informed of and has confidence in its water supply.

The paradox of assessing drinking water quality is that substances that make the water unappealing are often in themselves harmless, whilst the greatest health risk usually derives from micro-organisms or chemicals that are not visible and have no taste.

Sensitivity about water quality issues and reduced confidence in incident management were aptly demonstrated by the 1998 contamination events in Sydney NSW and the Longford gas explosion in Victoria. In Sydney in 1998, lack of adequate information led to widespread community distress and outrage, resulting in a Commission of Inquiry and significant changes to the manner in which the water supply in that city is managed. The Longford gas incident in Victoria demonstrated the importance of effective incident and emergency management procedures to address community concerns when there is disruption to an essential utility service.

The Victorian Auditor-General and the then Regulator-General have both highlighted inadequacies in the previous regulatory framework, including

inconsistencies in the quality of drinking water supplied around Victoria and different standards applying to the metropolitan and non-metropolitan sectors. The report by the Productivity Commission also revealed that there is considerable scope to improve regulatory processes in Australia and in particular to draw on benefit-cost analysis to identify appropriate standards.

International and national drinking water quality guidelines have also evolved over time, providing advice to practitioners on the levels of the characteristics, compounds and constituents found in water that can be regarded as consistent with good quality, as well as incorporating concepts of duty of care and effective risk management. Effective risk management methodologies are actively used in areas of the food industry and have in recent years gained considerable application in the drinking water supply industry.

The drinking water quality regulatory framework for Victoria was prepared in the context of these issues.

## The Safe Drinking Water Regulatory Framework For Victoria

The Safe Drinking Water regulatory framework was developed during the late 1990's and early years of this decade by the Victorian Department of Human Services, the main health agency, and the Victorian Department of Natural Resources and Environment (now the Department of Sustainability and Environment).

The objectives of the regulatory framework are to:

- protect public health in Victoria, in relation to drinking water supplies;
- create a consistent statewide regulatory framework for drinking water quality;
- establish and implement comprehensive risk management strategies for drinking water quality that covers the overall delivery chain from the catchment to consumer supplies;
- give Victorians access to objective information about the quality of drinking water that they receive;
- provide communities with the opportunity to establish local non-health-related standards for drinking water quality;

- ensure that proposed drinking water standards are subjected to a rigorous benefit-cost analysis; and
- provide clarity of roles of the various parties who may be involved in the management of incidents concerning drinking water.

During this process, consensus emerged that the best way of tackling the problem was to establish a regulatory framework for drinking water for Victoria that was developed through consultation and with carriage by the Minister for Health. This regulatory framework would consist of an Act of Parliament in Victoria with subordinate regulations, administered by an independent regulatory office within the Victorian Department of Human Services (DHS). A number of other models were examined against the objectives but were found to be inadequate in a number of key respects.

## Consultation

There were four consultation stages during the development of the regulatory framework.

The first stakeholder and public consultation stage took place in September and October 2000. DHS and DNRE (now DSE) jointly released a public Consultation Paper and held open community workshops around Victoria. This involved a broad range of stakeholders from various Government sectors, the water industry and the general community. The process elicited 44 written submissions, from water authorities, regulatory agencies and interested members of the public. Broad support was provided for the approach proposed. The proposal was further developed after careful consideration of the issues raised and detailed evaluation of policy options.

The second round of consultation took place from November 2001 to April 2002. This round was targeted on the Victorian water industry, to establish specific benefits and cost impacts of the proposal. The majority of submissions expressed support or strong support for the framework during this stage and identified significant benefits arising from the framework. As a result, no changes to the policy position previously

articulated were required, save for a few minor technical corrections.

The third stage was undertaken with Victorian Government agencies during 2002 and early 2003. This stage was based on feedback received from the earlier consultation rounds and focussed on obtaining agreement on the cost impact and funding mechanisms for the regulatory office.

The fourth stage is being undertaken during 2004. It incorporates public consultation on the draft content of the Safe Drinking Water Regulations and details of the apportionment process for the levy. At the time of writing of this paper, this round of consultation is not complete, but is scheduled to be complete in time for implementation of all aspects of the legislation.

## The Safe Drinking Water Act - An Overview

The *Safe Drinking Water Act* was passed in 2003 and will apply throughout Victoria from 1 July 2004. The Act requires water suppliers, as defined in the Act, to prepare, implement and audit risk management plans in relation to their supply of water, comply with standards for drinking water quality, communicate effectively with all stakeholders and publicly disclose relevant water quality information.

Water storage managers, also defined in the Act but essentially bulk water supply agencies, will be required to prepare, implement and audit risk management plans in respect of the supply of water to a water supplier, communicate effectively with all stakeholders and also publicly disclose relevant water quality information. The legislation does not apply to the supply of water for irrigation purposes or to packaged drinking water (e.g. bottled water) but can apply to certain types of non-potable water supplies.

The Act contains the principal obligations and refers to subordinate regulations covering a number of technical aspects of the legislation. These include, among other things, standards for drinking water quality, monitoring requirements, approval criteria for auditors and analysts, and the prescribed elements of risk management plans for water suppliers and water storage managers in Victoria. At the time of preparation of this paper, the regulations were in the process of development.

The new legislation will apply to the most significant water businesses in Victoria, namely the three Melbourne metropolitan water companies, the regional urban water authorities, Melbourne Water

Corporation and, for the first time in Australia, Parks Victoria (national park and land management agency), the Victorian alpine resorts management boards and rural water authorities (to the extent that these bodies are involved in the supply of drinking water). Auditors and laboratories that provide analytical services to water businesses in Victoria are also affected by the new legislation.

The legislation is grounded on principles of risk management and best practice. It clearly complements the new developments in risk management encapsulated in the twelve point risk management framework in the most recent edition of the 'Australian Drinking Water Guidelines'.

The legislation addresses concerns raised in the past by the Auditor-General and the Office of the Regulator-General that within the previous Victorian water quality regulatory framework, responsibilities for managing risks were unclear in a number of areas. The legislation provides the required clarification, and also clarifies roles and responsibilities amongst stakeholders for the management of incidents of contamination of drinking water in Victoria.

The legislation complements the Victorian *Food Act* 1984, which contains certain relevant offences and emergency management powers that apply to drinking water in Victoria. In particular, it will continue to be an offence under the *Food Act* to sell unsafe drinking water.

The legislation also ensures that water suppliers in Victoria place due emphasis on incident and emergency prevention and response capability and thereby complements management of incidents of terrorism in relation to water supply.

## Key Aspects of the Legislation

The structure of the legislation is best revealed by sequentially examining the contents of the *Safe Drinking Water Act*.

**Part 1** of the Act contains definitions and outlines the purpose and application of the act, namely to "... make provision for the supply of safe drinking water" in Victoria.

The legislation also allows for the formal identification and regulation of water that, although not intended for drinking, is supplied in a manner that may lead to it being confused with drinking water and inadvertently consumed by the public. The legislation regards this water as 'regulated water', which is also commonly known as non-drinking water or non-potable water. The legislation will not apply to the supply of packaged water (e.g. bottled water) or water for irrigation or water held privately

(e.g. rainwater tanks on rural properties).

**Part 2** of the Act obliges each water supplier to develop and implement drinking water risk management plans and systems to cover risks and hazards that may affect the quality of drinking water, from the catchment to the tap. Water storage managers will also be required to have in place and implement risk management plans. These plans will be required to be independently audited.

**Part 3** of the Act obliges the water suppliers to supply drinking water that meets a set of water quality standards, generally measured at or near the point at which the drinking water is supplied to consumers. The standards will cover key health-related criteria, such as microbiological and chemical safety, as well as selected aesthetic criteria. In particular, standards for chemicals mainly focus on residues or by-products of chemicals added to drinking water for treatment or disinfection purposes, with risk from chemicals such as those arising from catchment conditions being principally managed through the catchment-to-tap risk management processes.

**Part 3** also provides flexibility for specific local water quality standards for selected aesthetic criteria to be established through community consultation, provided any risks to public health have been adequately addressed. Initially, however, no standards for such aesthetic criteria are proposed. The water supplier will also be required to report to consumers on the quality of water supplied and disclose instances where the quality of water may, for whatever reason, be suspected of posing a risk to public health.

**Part 4** sets out the powers and functions of the Secretary to the Department of Human Services in relation to drinking water quality. In particular, this will include powers to enter into undertakings with water suppliers to achieve specified requirements and powers to request information. Part 4 establishes the mechanism for the exercise of these powers.

The powers and functions are (as set out in section 27 of the Act):

- a) to protect public health in relation to the supply of drinking water; and
- b) to monitor and enforce compliance with this Act and the regulations; and
- c) to report on the performance of water suppliers and water storage managers in relation to the requirements imposed on them under this Act; and
- d) to investigate and report on any aspect of drinking water quality in Victoria; and
- e) to make recommendations to the

Minister for Health on any matter relating to drinking water or regulated water; and f) to promote industry and public awareness and understanding of drinking water quality issues.

**Part 4** also grants the Secretary the power to provide directions to a water supplier or a water storage manager if the secretary believes that drinking water may pose a risk to public health. Authorised officers may enter water supply premises if the Secretary believes that drinking water may pose an immediate risk to public health.

The legislation does not contain monitoring or inspection powers since the water suppliers and water storage managers are required to self-monitor by reporting and complying with directions and providing specified information to the Secretary and the public. The Department intends to monitor compliance within a co-operative framework. If the water suppliers and water storage managers fail to provide the relevant information, the Secretary may impose an enforcement notice.

The legislation requires the Department to report annually to the Minister for Health on the status of drinking water quality in Victoria. It also requires the Minister to ensure that a copy of the report is laid before each house of the Victorian Parliament. The legislation also sets out the mechanism by which the cost of regulating the water suppliers will be funded by the water supply industry in Victoria.

**Part 5** of the Act empowers the Governor in Council to make the necessary regulations. This part also provides penalties for the provision of false and misleading information to the secretary or to the public.

Finally, **Part 6** of the Act proposes consequential amendments to existing legislation that clarifies the regulatory requirements placed on water suppliers. In particular, it repeals legislation that provided a water authority in Victoria with immunity from liability for any action taken in connection with the treatment of water in accordance with particular Acts.

## Benefits of the Regulatory Framework

The benefits to the Victorian community of the proposed framework are provided through the increasing use of risk assessment and management, improved assurance and confidence in the delivery of good quality drinking water, improved emphasis on catchment to tap management and improved transparency. This is expected to result in a reduced frequency of incidents of contamination of drinking

## DRINKING WATER INSTITUTIONAL ARRANGEMENTS IN VICTORIA

The Australian State of Victoria has established an institutional structure to manage urban water supplies from the catchment to the consumer. In the metropolitan area of Melbourne this involves Melbourne Water and the three metropolitan water companies, Yarra Valley Water, City West Water and South East Water. In the non-metropolitan sector, catchment management authorities, rural water authorities and the regional urban water authorities all have important roles and responsibilities. Catchment management authorities in Victoria have responsibilities for maintaining and improving river health and managing drainage schemes, nutrient management and waterway catchment protection. Rural water authorities in Victoria are responsible for the supply of bulk water to some regional urban water authorities as well as to industry and agriculture, usually transferred by rivers or channels. They operate a series of reservoirs and distribution systems, to

provide bulk water entitlements and allocations to meet the water requirements of their customers. Fifteen regional urban water authorities are responsible for the provision of urban water supply services including the quality of supply to urban communities within their areas of operation in Victoria. They operate reservoirs, water treatment plants, distribution systems and reticulation systems to provide water supply and sewerage services to their customers. In addition, six Alpine Resorts Management Boards manage the alpine resorts, such as Mount Buller, whilst Parks Victoria manages national park areas, which can include the provision of drinking water, such as Tidal River at Wilsons Promontory. Victorian Government departments, statutory authorities, local government, and incorporated and unincorporated co-operatives provide supplies to a small number of remote towns, roadside amenities, caravan parks and leisure resorts.

water and severity of such incidents, when they do occur.

The size of the benefits is subject to considerable uncertainty, given the infrequent nature of incidents of microbiological contamination of water supplies (for example, two incidents are known to have occurred in Victoria since 1987) and the long-term nature of health effects that may be associated with chemical contamination. For this reason, no specific net benefit estimate has been made.

The economic assessments drew on data from a number of significant recent drinking water contamination incidents, noting that:

- The 1998 contamination incident in Sydney NSW is estimated to have had a very significant cost, even though few specific adverse health impacts were observed.
- The 2000 contaminated drinking water incident at Walkerton (population 5,000), in Ontario Canada, in which seven people died and 2,300 became ill, incurred total costs equivalent to A\$182.9 million.
- The Walkerton judicial inquiry second report made 93 recommendations including a catchment to tap risk management approach, appropriate standard setting, legislation and regulatory oversight, independent audits, and disclosure of information, which are similar to those proposed in this framework.

Thus, the potential benefits flowing from even a relatively small reduction in the probability of such incidents, due to the better water supply system management expected to flow from the proposed legislation, are extremely substantial.

Any new capital expenditure by water suppliers to comply with regulatory obligations would be phased in through establishing undertakings between the water suppliers and the regulatory office. The undertakings are a key element of the regulatory framework. They essentially allow the Secretary to the Department to enter an agreement with a water supplier to defer meeting a particular obligation until a later date, through agreed interim risk management processes.

## Environmental Considerations and Competition Policy

Environmental improvement is likely to result from closer co-ordination between water suppliers, catchment management authorities, local government and land owners whose activities may affect the quality of raw water. Improved management is also likely to reduce variation in raw (i.e. source) water quality, which provides environmental benefits as well as assisting water purification processes.

The framework is consistent with the Council of Australian Governments (COAG) National Competition Policy

principles for institutional reform, as it clearly separates the roles of policy, standard setting, regulatory enforcement and service provision.

The legislative framework does not include any substantive restrictions on competition, beyond a requirement that analysts that test drinking water quality are suitably accredited and that auditors are suitably approved.

## Conclusion

Victoria has developed far reaching, landmark legislation covering the management of drinking water quality in that State.

The expected costs of the regulatory framework, which represent a very small proportion of the overall revenues of the Victorian water industry, are proportionate to the expected benefits of providing an integrated system of quality assurance for drinking water which is at international best practice and which responds to significant criticisms made in recent years of Victoria's existing regulatory arrangements.

Whilst broadly consistent with most elements of the Australian Drinking Water Guidelines, the legislation is anticipated to lay down some challenges for the water industry and for guideline based documents. In particular, challenges are likely to arise from the expansion of audit processes, more rigorous and novel means of communicating information to consumers, challenges for small or non-potable water supplies and challenges arising from matters such as water reuse and household point-of-use devices.

These are challenges posed for the water industry in Australia in general. However, the Victorian legislation, with its more rigorous risk management and information disclosure obligations, can be expected to drive debate in this area.

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